

Recording and editing 360° videos

This guide will walk you through the complete process of creating and uploading your own 360° videos to be displayed through the Broomx immersive projection systems. It is designed for beginners and doesn't require previous technical knowledge. The 360° videos produced are then played back through the Broomx projector using a USB memory stick, to ensure privacy and easy management.

Overview

360° camera model

To start recording your own 360° videos, you'll first need a 360° camera. This guide refers to the models: Insta360° X3, X4 and X5.

Both models are available for purchase as accessories which can be added to your order of the $\underline{\mathsf{MK}}$ and $\underline{\mathsf{MK2}}$ immersive projectors.

Other 360° camera brands and models may be compatible with the required media specifications (see below), but Broomx cannot guarantee or provide support.



What you'll need

- Insta360 camera
- SD memory card
- SD memory card reader for PC
- Insta360 invisible selfie stick or tripod (optional)
- Lens wipes or lens cleanser cloth
- PC for editing the videos
- USB memory stick 64Gb

Recording 360° videos

Preparing the camera

- 1. Make sure the battery is fully charged.
- 2. Make sure the SD memory card is correctly formatted and has enough free space.
- 3. Clean the lenses with a soft lens cleanser cloth or a lens wipe.
- 4. Configure the camera as follows:
 - Mode: 360° video
 - Resolution: Highest available starting 4K.
 - Framerate: 30fps.
 - Image stabilization: enabled (by default)



Recording a 360° video

- 1. Insert the SD memory card into the Insta360 camera.
- 2. Attach the Insta360° to the selfie stick or tripod.
- 3. Power on the camera.
- 4. Press the Play button to start the recording.
- 5. Press the Play button again to stop the recording.

Recording tips

- 360° cameras capture the entire environment it is placed in: make sure all elements in its surroundings are taken in account.
- If you don't want to appear in the recording, you can leave the space / room after starting the recording, then edit out the beginning and end of the recording.
- Place the camera at eye height whenever possible.
- If recording while in movement, walk at a slow and steady pace to avoid excessive vibrations.
- Avoid objects too close to the camera lenses which will result in distortion. Maintain a 1m (3 feet) distance from the object or action you are recording.



Editing the 360° videos

Importing and editing the videos

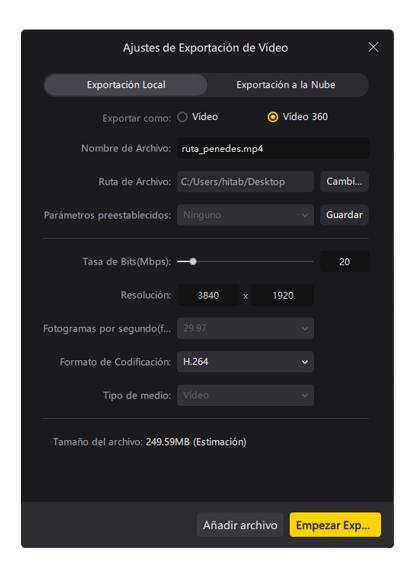
- 1. Remove the SD memory card from the Insta360 camera.
- 2. Connect the SD card reader to your PC, or use the built-in reader if available.
- 3. Download the videos to your local hard drive. If desired, make a backup copy of the raw videos to an external hard drive or a cloud based drive.
- 4. Download the Insta360 SUDIO software.
- 5. Open Insta360 STUDIO and import the 360° videos.
- 6. From the top menu, select the "Media" option (do not select "Project").
- 7. Crop the video start and end if needed, further edit the clips according to your needs.
- 8. Apply the "Block direction" function to maintain the image leveled.
- 9. Apple the "Dynamic stitching" function to avoid seams in closer objects.
- 10. Apply the "Color Plus" feature by 30-50% depending on the video's characteristics.
- 11. Adjust the brightness and contrast, as well as other parameters according to your needs and knowhow.
- 12. Enable "ND Movement" to smooth movements and reduce vibrations in the video.
- 13. Enable "Noise reduction" to improve the quality of audio.

^{*} In most cases, little image adjustment is required. Avoid over-tweaking the image.



Exporting the videos

- 1. Once you're happy with the results, click on "Export".
- 2. Select the file name and folder for the export.
- 3. Enter the following parameters:
 - Export as: 360° video
 - Bitrate: 20 Mbps (35 Mbps if the videos are to be further edited in Adobe Premiere or Davinci Resolve).
 - Resolution: 3840x1920p
 - Codec: H.264
- 4. Click on "Start Export" and wait for the export to complete.
- 5. Repeat the process with the other videos.





Displaying the 360° videos using a USB pendrive

USB pen drive specifications

- Format: ExFat
- Maximum size: 64Gb
- Device name: specify a device name (don't leave blank or with special characters).
- File structure: add the videos you want to display and only those videos in the root folder of the USB pen drive.

Playing back 360° videos from the USB pen drive

- 1. Power on the projector and CPU.
- 2. Connect the USB pen drive to a USB slot on the CPU.
- 3. Connect your smartphone / tablet / PC to the MK device WiFi network:
 - Network: MK#
 - Password: broomxnet
- 4. Open a web browser and enter the following URL:
 - broomx.control
- 5. In the top right menu, navigate to the "USB" section.
- 6. Select a video for playback.

Privacy statement

The 360° videos are played back directly from the USB memory stick and are not downloaded to the projector's local hard drive. The 360° videos are available for playback only while the USB memory stick is connected to the projector.